

SAFETY DATA SHEET



Lambda FIX II Xho I Partial Fill-In - Gigapack III Cloning Kit, Part Number 248612

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

| | | | |
|--------------------------------|--|-----------|--|
| Product name | : Lambda FIX II Xho I Partial Fill-In - Gigapack III Cloning Kit, Part Number 248612 | | |
| Part no. (chemical kit) | : 248612 | | |
| Part no. | : Gigapack III packaging extract | 200201-41 | |
| | VCS257 E. coli Strain | 200256-51 | |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | 246203-51 | |
| | Lambda FixII Vector Predigested With Xho I | 248211-51 | |
| | XL1-Blue MRA E.coli Strain | 200302-81 | |
| | XL1-Blue MRA (p2) E. coli Strain | 200303-81 | |
| | pMF/BamH I Test Insert | 210200-55 | |

1.2 Relevant identified uses of the substance or mixture and uses advised against

| | | | |
|----------------------|--|-------------------------------|--|
| Material uses | : Analytical reagent. | | |
| | Gigapack III packaging extract | 0.275 ml (11 x 0.025 ml) | |
| | VCS257 E. coli Strain | 1 ml | |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | 0.005 ml (1.05 µg 0.21 µg/µl) | |
| | Lambda FixII Vector Predigested With Xho I | 0.01 ml (10 µg 1 µg/µl) | |
| | XL1-Blue MRA E.coli Strain | 0.05 ml | |
| | XL1-Blue MRA (p2) E.coli Strain | 0.5 ml | |
| | pMF/BamH I Test Insert | 0.01 ml (5 µg 0.5 µg/µl) | |

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

| | | |
|---------------------------|--|---------|
| Product definition | : Gigapack III packaging extract | Mixture |
| | VCS257 E. coli Strain | Mixture |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Mixture |
| | Lambda FixII Vector Predigested With Xho I | Mixture |
| | XL1-Blue MRA E.coli Strain | Mixture |

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SECTION 2: Hazards identification

XL1-Blue MRA (p2) E. coli Strain Mixture
pMF/BamH I Test Insert Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

| | | |
|---|---|---|
| Ingredients of unknown toxicity | : Gigapack III packaging extract VCS257 E. coli Strain XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E.coli Strain | Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30% |
| Ingredients of unknown ecotoxicity | : Gigapack III Gold-11 packaging extract VCS257 host strain λc1857 Sam7 wild-type lambda control DNA Lambda FIX II Xho I-predigested vector XL1-Blue MRA host cells XL1-Blue MRA (P2) host cells pMF/BamH I Test Insert | Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 8% Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. |

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

| | | |
|--------------------------|---|---|
| Signal word | : Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No signal word. No signal word. No signal word. No signal word. No signal word. No signal word. No signal word. |
| Hazard statements | : Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |

Precautionary statements

SECTION 2: Hazards identification

| | | | |
|------------------------------------|---|--|---|
| Prevention | : | Gigapack III packaging extract | Not applicable. |
| | | VCS257 E. coli Strain | Not applicable. |
| | | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | | Lambda FixII Vector Predigested With Xho I | Not applicable. |
| | | XL1-Blue MRA E.coli Strain | Not applicable. |
| | | XL1-Blue MRA (p2) E. coli Strain | Not applicable. |
| | | pMF/BamH I Test Insert | Not applicable. |
| Response | : | Gigapack III packaging extract | Not applicable. |
| | | VCS257 E. coli Strain | Not applicable. |
| | | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | | Lambda FixII Vector Predigested With Xho I | Not applicable. |
| | | XL1-Blue MRA E.coli Strain | Not applicable. |
| | | XL1-Blue MRA (p2) E. coli Strain | Not applicable. |
| | | pMF/BamH I Test Insert | Not applicable. |
| Storage | : | Gigapack III packaging extract | Not applicable. |
| | | VCS257 E. coli Strain | Not applicable. |
| | | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | | Lambda FixII Vector Predigested With Xho I | Not applicable. |
| | | XL1-Blue MRA E.coli Strain | Not applicable. |
| | | XL1-Blue MRA (p2) E. coli Strain | Not applicable. |
| | | pMF/BamH I Test Insert | Not applicable. |
| Disposal | : | Gigapack III packaging extract | Not applicable. |
| | | VCS257 E. coli Strain | Not applicable. |
| | | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | | Lambda FixII Vector Predigested With Xho I | Not applicable. |
| | | XL1-Blue MRA E.coli Strain | Not applicable. |
| | | XL1-Blue MRA (p2) E. coli Strain | Not applicable. |
| | | pMF/BamH I Test Insert | Not applicable. |
| Hazardous ingredients | : | VCS257 E. coli Strain | Not applicable. |
| | | XL1-Blue MRA E.coli Strain | Not applicable. |
| | | XL1-Blue MRA (p2) E. coli Strain | Not applicable. |
| Supplemental label elements | : | Gigapack III packaging extract | Not applicable. |
| | | VCS257 E. coli Strain | Safety data sheet available on request. |
| | | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | | Lambda FixII Vector Predigested With Xho I | Not applicable. |
| | | XL1-Blue MRA E.coli Strain | Safety data sheet available on request. |

SECTION 2: Hazards identification

| | | |
|---|--|---|
| | XL1-Blue MRA (p2) E. coli Strain | Safety data sheet available on request. |
| | pMF/BamH I Test Insert | Not applicable. |
| Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | Gigapack III packaging extract | Not applicable. |
| | VCS257 E. coli Strain | Not applicable. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | Lambda FixII Vector Predigested With Xho I | Not applicable. |
| | XL1-Blue MRA E.coli Strain | Not applicable. |
| | XL1-Blue MRA (p2) E. coli Strain | Not applicable. |
| | pMF/BamH I Test Insert | Not applicable. |
| Special packaging requirements | | |
| Tactile warning of danger | Gigapack III packaging extract | Not applicable. |
| | VCS257 E. coli Strain | Not applicable. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | Lambda FixII Vector Predigested With Xho I | Not applicable. |
| | XL1-Blue MRA E.coli Strain | Not applicable. |
| | XL1-Blue MRA (p2) E. coli Strain | Not applicable. |
| | pMF/BamH I Test Insert | Not applicable. |
| 2.3 Other hazards | | |
| Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII | Gigapack III packaging extract | This mixture does not contain any substances that are assessed to be a PBT or a vPvB. |
| | VCS257 E. coli Strain | This mixture does not contain any substances that are assessed to be a PBT or a vPvB. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | This mixture does not contain any substances that are assessed to be a PBT or a vPvB. |
| | Lambda FixII Vector Predigested With Xho I | This mixture does not contain any substances that are assessed to be a PBT or a vPvB. |
| | XL1-Blue MRA E.coli Strain | This mixture does not contain any substances that are assessed to be a PBT or a vPvB. |
| | XL1-Blue MRA (p2) E. coli Strain | This mixture does not contain any substances that are assessed to be a PBT or a vPvB. |
| | pMF/BamH I Test Insert | This mixture does not contain any substances that are assessed to be a PBT or a vPvB. |
| Other hazards which do not result in classification | Gigapack III packaging extract | None known. |
| | VCS257 E. coli Strain | None known. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | None known. |
| | Lambda FixII Vector Predigested With Xho I | None known. |
| | XL1-Blue MRA E.coli Strain | None known. |
| | XL1-Blue MRA (p2) E. coli Strain | None known. |
| | pMF/BamH I Test Insert | None known. |

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SECTION 3: Composition/information on ingredients

| | | | |
|-----------------------|---|---------------------------------|---------|
| 3.1 Substances | : | Gigapack III packaging extract | Mixture |
| | | VCS257 E. coli Strain | Mixture |
| | | Wild-Type Lambda DNA c1857ind | Mixture |
| | | 1 Sam7 | |
| | | Lambda FixII Vector Predigested | Mixture |
| | | With Xho I | |
| | | XL1-Blue MRA E.coli Strain | Mixture |
| | | XL1-Blue MRA (p2) E.coli Strain | Mixture |
| | | pMF/BamH I Test Insert | Mixture |

| Product/ingredient name | Identifiers | % | Regulation (EC) No. 1272/2008 [CLP] | Type |
|--|--|-----------|---|------|
| Gigapack III packaging extract Sucrose | REACH #: Annex IV EC: 200-334-9 CAS: 57-50-1 | ≤10 | Not classified. | [2] |
| VCS257 E. coli Strain Glycerol | REACH #: Annex V EC: 200-289-5 CAS: 56-81-5 | ≥10 - ≤25 | Not classified. | [2] |
| Sodium chloride | EC: 231-598-3 CAS: 7647-14-5 | ≤3 | Eye Irrit. 2, H319 | [1] |
| XL1-Blue MRA E.coli Strain Glycerol | REACH #: Annex V EC: 200-289-5 CAS: 56-81-5 | ≥10 - ≤25 | Not classified. | [2] |
| Sodium chloride | EC: 231-598-3 CAS: 7647-14-5 | ≤3 | Eye Irrit. 2, H319 | [1] |
| XL1-Blue MRA (p2) E.coli Strain Glycerol | REACH #: Annex V EC: 200-289-5 CAS: 56-81-5 | ≥10 - ≤25 | Not classified. | [2] |
| Sodium chloride | EC: 231-598-3 CAS: 7647-14-5 | ≤3 | Eye Irrit. 2, H319 | [1] |
| | | | See Section 16 for the full text of the H statements declared above. | |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of first aid measures

| | | | |
|--------------------|---|--------------------------------|---|
| Eye contact | : | Gigapack III packaging extract | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | | VCS257 E. coli Strain | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | | Wild-Type Lambda DNA | Immediately flush eyes with plenty of water, occasionally |

SECTION 4: First aid measures

| | | |
|---------------------|---|---|
| | c1857ind 1 Sam7 | lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | Lambda FixII Vector Predigested With Xho I | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | XL1-Blue MRA E.coli Strain | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | XL1-Blue MRA (p2) E. coli Strain | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | pMF/BamH I Test Insert | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| Inhalation | : Gigapack III packaging extract | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | VCS257 E. coli Strain | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | Lambda FixII Vector Predigested With Xho I | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | XL1-Blue MRA E.coli Strain | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | XL1-Blue MRA (p2) E. coli Strain | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | pMF/BamH I Test Insert | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| Skin contact | : Gigapack III packaging extract | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | VCS257 E. coli Strain | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | Lambda FixII Vector Predigested With Xho I | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | XL1-Blue MRA E.coli Strain | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | XL1-Blue MRA (p2) E. coli Strain | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | pMF/BamH I Test Insert | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |

SECTION 4: First aid measures

| | | |
|-----------------------------------|--|---|
| Ingestion | : Gigapack III packaging extract | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| | VCS257 E. coli Strain | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| | Lambda FixII Vector Predigested With Xho I | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| | XL1-Blue MRA E.coli Strain | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| | XL1-Blue MRA (p2) E. coli Strain | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| | pMF/BamH I Test Insert | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| Protection of first-aiders | : Gigapack III packaging extract | No action shall be taken involving any personal risk or without suitable training. |
| | VCS257 E. coli Strain | No action shall be taken involving any personal risk or without suitable training. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No action shall be taken involving any personal risk or without suitable training. |
| | Lambda FixII Vector Predigested With Xho I | No action shall be taken involving any personal risk or without suitable training. |
| | XL1-Blue MRA E.coli Strain | No action shall be taken involving any personal risk or without suitable training. |
| | XL1-Blue MRA (p2) E. coli Strain | No action shall be taken involving any personal risk or without suitable training. |
| | pMF/BamH I Test Insert | No action shall be taken involving any personal risk or without suitable training. |

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

SECTION 4: First aid measures

| | | | |
|---------------------|---|---|---|
| Eye contact | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |
| Inhalation | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |
| Skin contact | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |
| Ingestion | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |

Over-exposure signs/symptoms

| | | | |
|--------------------|---|---|---|
| Eye contact | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. |
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| | | | |
|---------------------|---|---|---|
| Inhalation | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. |
| Skin contact | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. |
| Ingestion | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. |

4.3 Indication of any immediate medical attention and special treatment needed

| | | | |
|----------------------------|---|---|---|
| Notes to physician | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain | No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. |

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| XL1-Blue MRA (p2) E. coli Strain | No specific treatment. |
| pMF/BamH I Test Insert | No specific treatment. |

SECTION 5: Firefighting measures

5.1 Extinguishing media

| | | |
|---------------------------------------|--|---|
| Suitable extinguishing media | : Gigapack III packaging extract | Use an extinguishing agent suitable for the surrounding fire. |
| | VCS257 E. coli Strain | Use an extinguishing agent suitable for the surrounding fire. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Use an extinguishing agent suitable for the surrounding fire. |
| | Lambda FixII Vector Predigested With Xho I | Use an extinguishing agent suitable for the surrounding fire. |
| | XL1-Blue MRA E.coli Strain | Use an extinguishing agent suitable for the surrounding fire. |
| | XL1-Blue MRA (p2) E. coli Strain | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | : pMF/BamH I Test Insert | Use an extinguishing agent suitable for the surrounding fire. |
| | : Gigapack III packaging extract | None known. |
| | VCS257 E. coli Strain | None known. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | None known. |
| | Lambda FixII Vector Predigested With Xho I | None known. |
| | XL1-Blue MRA E.coli Strain | None known. |
| XL1-Blue MRA (p2) E. coli Strain | None known. | |
| pMF/BamH I Test Insert | None known. | |

5.2 Special hazards arising from the substance or mixture

| | | |
|--|--|---|
| Hazards from the substance or mixture | : Gigapack III packaging extract | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | VCS257 E. coli Strain | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | Lambda FixII Vector Predigested With Xho I | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | XL1-Blue MRA E.coli Strain | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | XL1-Blue MRA (p2) E. coli Strain | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | pMF/BamH I Test Insert | In a fire or if heated, a pressure increase will occur and the container may burst. |
| Hazardous combustion products | : Gigapack III packaging extract | Decomposition products may include the following materials: carbon dioxide carbon monoxide |
| | VCS257 E. coli Strain | Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No specific data. |
| | Lambda FixII Vector Predigested With Xho I | No specific data. |
| | XL1-Blue MRA E.coli Strain | Decomposition products may include the following materials: |

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| | |
|----------------------------------|--|
| | carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides |
| XL1-Blue MRA (p2) E. coli Strain | Decomposition products may include the following materials: |
| | carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides |
| pMF/BamH I Test Insert | No specific data. |

5.3 Advice for firefighters

Special precautions for fire-fighters

| | |
|--|---|
| : Gigapack III packaging extract | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| VCS257 E. coli Strain | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Wild-Type Lambda DNA c1857ind 1 Sam7 | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| Lambda FixII Vector Predigested With Xho I | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| XL1-Blue MRA E.coli Strain | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| XL1-Blue MRA (p2) E. coli Strain | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| pMF/BamH I Test Insert | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |

Special protective equipment for fire-fighters

| | |
|--|---|
| : Gigapack III packaging extract | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |
| VCS257 E. coli Strain | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |
| Wild-Type Lambda DNA c1857ind 1 Sam7 | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |
| Lambda FixII Vector Predigested With Xho I | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |
| XL1-Blue MRA E.coli Strain | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) |

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SECTION 5: Firefighting measures

| | |
|----------------------------------|---|
| XL1-Blue MRA (p2) E. coli Strain | conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |
| pMF/BamH I Test Insert | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

| | | |
|------------------------------------|--|---|
| For non-emergency personnel | : Gigapack III packaging extract | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| | VCS257 E. coli Strain | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| | Lambda FixII Vector Predigested With Xho I | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| | XL1-Blue MRA E.coli Strain | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| | XL1-Blue MRA (p2) E. coli Strain | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| | pMF/BamH I Test Insert | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| For emergency responders | : Gigapack III packaging extract | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| | VCS257 E. coli Strain | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and |

SECTION 6: Accidental release measures

| | |
|---|---|
| Lambda FixII Vector Predigested With Xho I | unsuitable materials. See also the information in "For non-emergency personnel". If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| XL1-Blue MRA E.coli Strain | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| XL1-Blue MRA (p2) E. coli Strain | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| pMF/BamH I Test Insert | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |

6.2 Environmental precautions

| | |
|---|---|
| : Gigapack III packaging extract | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| VCS257 E. coli Strain | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| Wild-Type Lambda DNA c1857ind 1 Sam7 | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| Lambda FixII Vector Predigested With Xho I | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| XL1-Blue MRA E.coli Strain | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| XL1-Blue MRA (p2) E. coli Strain | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| pMF/BamH I Test Insert | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |

6.3 Methods and material for containment and cleaning up

Methods for cleaning up

| | |
|--------------------------------------|---|
| : Gigapack III packaging extract | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| VCS257 E. coli Strain | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| Wild-Type Lambda DNA c1857ind 1 Sam7 | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, |

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SECTION 6: Accidental release measures

| | |
|---|--|
| Lambda FixII Vector Predigested With Xho I | or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| XL1-Blue MRA E.coli Strain | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| XL1-Blue MRA (p2) E. coli Strain | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| pMF/BamH I Test Insert | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

| | | |
|---|--|--|
| Protective measures | : Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8). |
| Advice on general occupational hygiene | : Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and |

SECTION 7: Handling and storage

| | |
|---|---|
| Lambda FixII Vector Predigested With Xho I | protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| XL1-Blue MRA E.coli Strain | Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| XL1-Blue MRA (p2) E. coli Strain | Potentially biohazardous material. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| pMF/BamH I Test Insert | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |

7.2 Conditions for safe storage, including any incompatibilities

Storage

| | |
|---|---|
| : Gigapack III packaging extract | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |
| VCS257 E. coli Strain | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |
| Wild-Type Lambda DNA c1857ind 1 Sam7 | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |
| Lambda FixII Vector Predigested With Xho I | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and |

SECTION 7: Handling and storage

| | |
|----------------------------------|---|
| | well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |
| XL1-Blue MRA E.coli Strain | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |
| XL1-Blue MRA (p2) E. coli Strain | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |
| pMF/BamH I Test Insert | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |

7.3 Specific end use(s)

| | | |
|---|--|---|
| Recommendations | : Gigapack III packaging extract | Industrial applications, Professional applications. |
| | VCS257 E. coli Strain | Industrial applications, Professional applications. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Industrial applications, Professional applications. |
| | Lambda FixII Vector Predigested With Xho I | Industrial applications, Professional applications. |
| | XL1-Blue MRA E.coli Strain | Industrial applications, Professional applications. |
| | XL1-Blue MRA (p2) E. coli Strain | Industrial applications, Professional applications. |
| | pMF/BamH I Test Insert | Industrial applications, Professional applications. |
| Industrial sector specific solutions | : Gigapack III packaging extract | Not applicable. |
| | VCS257 E. coli Strain | Not applicable. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | Lambda FixII Vector Predigested With Xho I | Not applicable. |
| | XL1-Blue MRA E.coli | Not applicable. |

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SECTION 7: Handling and storage

Strain
 XL1-Blue MRA (p2) E. coli Strain Not applicable.
 coli Strain
 pMF/BamH I Test Insert Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|---|--|
| <input checked="" type="checkbox"/> Gigapack III packaging extract Sucrose | EH40/2005 WELs (United Kingdom (UK), 8/2018). STEL: 20 mg/m ³ 15 minutes. TWA: 10 mg/m ³ 8 hours. |
| VCS257 E. coli Strain Glycerol | EH40/2005 WELs (United Kingdom (UK), 8/2018). TWA: 10 mg/m ³ 8 hours. Form: Mist |
| XL1-Blue MRA E.coli Strain Glycerol | EH40/2005 WELs (United Kingdom (UK), 8/2018). TWA: 10 mg/m ³ 8 hours. Form: Mist |
| XL1-Blue MRA (p2) E.coli Strain Glycerol | EH40/2005 WELs (United Kingdom (UK), 8/2018). TWA: 10 mg/m ³ 8 hours. Form: Mist |

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|--|------|-----------------------|---------------------------|--------------------|----------|
| <input checked="" type="checkbox"/> VCS257 E. coli Strain Sodium chloride | DNEL | Short term Oral | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 295.52 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 295.52 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 443.28 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 443.28 mg/m ³ | General population | Systemic |
| | DNEL | Short term Inhalation | 2068.62 mg/m ³ | Workers | Systemic |

SECTION 8: Exposure controls/personal protection

| | | | | | |
|---|----------------------|---------------------------|---------------------------|--------------------|----------|
| XL1-Blue MRA E.coli Strain Sodium chloride | DNEL | Long term Inhalation | 2068.62 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Oral | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 295.52 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 295.52 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 443.28 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 443.28 mg/m ³ | General population | Systemic |
| | DNEL | Short term Inhalation | 2068.62 mg/m ³ | Workers | Systemic |
| XL1-Blue MRA (p2) E.coli Strain Sodium chloride | DNEL | Long term Inhalation | 2068.62 mg/m ³ | Workers | Systemic |
| | DNEL | Short term Oral | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 126.65 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 295.52 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 295.52 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 443.28 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 443.28 mg/m ³ | General population | Systemic |
| | DNEL | Short term Inhalation | 2068.62 mg/m ³ | Workers | Systemic |
| DNEL | Long term Inhalation | 2068.62 mg/m ³ | Workers | Systemic | |

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Handle as biohazard material (Biosafety level 1). Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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SECTION 8: Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- | | | |
|-----------------------|--------------------------------------|----------------|
| Physical state | : Gigapack III packaging extract | Liquid. |
| | VCS257 E. coli Strain | Liquid. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Liquid. |
| | Lambda FixII Vector | Liquid. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli Strain | Liquid. |
| | XL1-Blue MRA (p2) E. coli Strain | Liquid. |
| | pMF/BamH I Test Insert | Liquid. |
| Colour | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | Lambda FixII Vector | Not available. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | Not available. |
| Odour | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | Lambda FixII Vector | Not available. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli | Not available. |

SECTION 9: Physical and chemical properties

| | | |
|--|--|----------------|
| | Strain | |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | Not available. |
| Odour threshold | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | Lambda FixII Vector Predigested With Xho I | Not available. |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | Not available. |
| pH | : Gigapack III packaging extract | 8 |
| | VCS257 E. coli Strain | 7 |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | 7 |
| | Lambda FixII Vector Predigested With Xho I | 7.5 |
| | XL1-Blue MRA E.coli Strain | 7 |
| | XL1-Blue MRA (p2) E. coli Strain | 7 |
| | pMF/BamH I Test Insert | 8 |
| Melting point/freezing point | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | 0°C |
| | Lambda FixII Vector Predigested With Xho I | 0°C |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | 0°C |
| Initial boiling point and boiling range | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | 100°C |
| | Lambda FixII Vector Predigested With Xho I | 100°C |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | 100°C |
| Flash point | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | Lambda FixII Vector Predigested With Xho I | Not available. |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |

SECTION 9: Physical and chemical properties

| | | |
|---|----------------------------------|-----------------|
| | coli Strain | |
| | pMF/BamH I Test Insert | Not available. |
| Evaporation rate | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda | Not available. |
| | DNA c1857ind 1 Sam7 | |
| | Lambda FixII Vector | Not available. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | Not available. |
| Flammability (solid, gas) | : Gigapack III packaging extract | Not applicable. |
| | VCS257 E. coli Strain | Not applicable. |
| | Wild-Type Lambda | Not applicable. |
| | DNA c1857ind 1 Sam7 | |
| | Lambda FixII Vector | Not applicable. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli Strain | Not applicable. |
| | XL1-Blue MRA (p2) E. coli Strain | Not applicable. |
| | pMF/BamH I Test Insert | Not applicable. |
| Upper/lower flammability or explosive limits | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda | Not available. |
| | DNA c1857ind 1 Sam7 | |
| | Lambda FixII Vector | Not available. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | Not available. |
| Vapour pressure | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda | Not available. |
| | DNA c1857ind 1 Sam7 | |
| | Lambda FixII Vector | Not available. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | Not available. |
| Vapour density | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda | Not available. |
| | DNA c1857ind 1 Sam7 | |
| | Lambda FixII Vector | Not available. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |

SECTION 9: Physical and chemical properties

| | | |
|---|----------------------------------|--|
| | coli Strain | |
| | pMF/BamH I Test Insert | Not available. |
| Relative density | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda | Not available. |
| | DNA c1857ind 1 Sam7 | |
| | Lambda FixII Vector | Not available. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli | Not available. |
| | Strain | |
| | XL1-Blue MRA (p2) E. | Not available. |
| | coli Strain | |
| | pMF/BamH I Test Insert | Not available. |
| Solubility(ies) | : Gigapack III packaging extract | Easily soluble in the following materials: cold water and hot water. |
| | VCS257 E. coli Strain | Easily soluble in the following materials: cold water and hot water. |
| | Wild-Type Lambda | Easily soluble in the following materials: cold water and hot water. |
| | DNA c1857ind 1 Sam7 | Easily soluble in the following materials: cold water and hot water. |
| | Lambda FixII Vector | Easily soluble in the following materials: cold water and hot water. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli | Soluble in the following materials: cold water and hot water. |
| | Strain | |
| | XL1-Blue MRA (p2) E. | Soluble in the following materials: cold water and hot water. |
| | coli Strain | |
| | pMF/BamH I Test Insert | Easily soluble in the following materials: cold water and hot water. |
| Partition coefficient: n-octanol/water | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda | Not available. |
| | DNA c1857ind 1 Sam7 | |
| | Lambda FixII Vector | Not available. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli | Not available. |
| | Strain | |
| | XL1-Blue MRA (p2) E. | Not available. |
| | coli Strain | |
| | pMF/BamH I Test Insert | Not available. |
| Auto-ignition temperature | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda | Not available. |
| | DNA c1857ind 1 Sam7 | |
| | Lambda FixII Vector | Not available. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli | Not available. |
| | Strain | |
| | XL1-Blue MRA (p2) E. | Not available. |
| | coli Strain | |
| | pMF/BamH I Test Insert | Not available. |
| Decomposition temperature | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda | Not available. |
| | DNA c1857ind 1 Sam7 | |
| | Lambda FixII Vector | Not available. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli | Not available. |
| | Strain | |

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SECTION 9: Physical and chemical properties

| | | |
|-----------------------------|--|----------------|
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | Not available. |
| Viscosity | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | Lambda FixII Vector Predigested With Xho I | Not available. |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | Not available. |
| Explosive properties | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | Lambda FixII Vector Predigested With Xho I | Not available. |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | Not available. |
| Oxidising properties | : Gigapack III packaging extract | Not available. |
| | VCS257 E. coli Strain | Not available. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not available. |
| | Lambda FixII Vector Predigested With Xho I | Not available. |
| | XL1-Blue MRA E.coli Strain | Not available. |
| | XL1-Blue MRA (p2) E. coli Strain | Not available. |
| | pMF/BamH I Test Insert | Not available. |

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

| | | |
|------------------------|--|--|
| 10.1 Reactivity | : Gigapack III packaging extract | No specific test data related to reactivity available for this product or its ingredients. |
| | VCS257 E. coli Strain | No specific test data related to reactivity available for this product or its ingredients. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No specific test data related to reactivity available for this product or its ingredients. |
| | Lambda FixII Vector Predigested With Xho I | No specific test data related to reactivity available for this product or its ingredients. |
| | XL1-Blue MRA E.coli Strain | No specific test data related to reactivity available for this product or its ingredients. |
| | XL1-Blue MRA (p2) E. coli Strain | No specific test data related to reactivity available for this product or its ingredients. |
| | pMF/BamH I Test Insert | No specific test data related to reactivity available for this product or its ingredients. |

SECTION 10: Stability and reactivity

| | | |
|--|---|---|
| 10.2 Chemical stability | : Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. |
| 10.3 Possibility of hazardous reactions | : Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. |
| 10.4 Conditions to avoid | : Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. |
| 10.5 Incompatible materials | : Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. |
| 10.6 Hazardous decomposition products | : Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector | Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

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SECTION 10: Stability and reactivity

| | |
|---------------------------------|--|
| Predigested With Xho I | decomposition products should not be produced. |
| XL1-Blue MRA E.coli Strain | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| XL1-Blue MRA (p2) E.coli Strain | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| pMF/BamH I Test Insert | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|-----------|---------|------------|----------|
| VCS257 E. coli Strain Sodium chloride | LD50 Oral | Rat | 3000 mg/kg | - |
| XL1-Blue MRA E.coli Strain Sodium chloride | LD50 Oral | Rat | 3000 mg/kg | - |
| XL1-Blue MRA (p2) E.coli Strain Sodium chloride | LD50 Oral | Rat | 3000 mg/kg | - |

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| VCS257 E. coli Strain Sodium chloride | 3000 | N/A | N/A | N/A | N/A |
| XL1-Blue MRA E.coli Strain Sodium chloride | 3000 | N/A | N/A | N/A | N/A |
| XL1-Blue MRA (p2) E.coli Strain Sodium chloride | 3000 | N/A | N/A | N/A | N/A |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|--------------------------|---------|-------|-----------------|-------------|
| VCS257 E. coli Strain Sodium chloride | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 mg | - |
| | Eyes - Moderate irritant | Rabbit | - | 10 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| XL1-Blue MRA E.coli Strain Sodium chloride | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 mg | - |
| | Eyes - Moderate irritant | Rabbit | - | 10 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| XL1-Blue MRA (p2) E.coli Strain Sodium chloride | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 mg | - |
| | Eyes - Moderate irritant | Rabbit | - | 10 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |

SECTION 11: Toxicological information

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

| | |
|----------------------------------|--|
| Gigapack III packaging extract | Not available. |
| VCS257 E. coli Strain | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| Wild-Type Lambda DNA | Not available. |
| c1857ind 1 Sam7 | |
| Lambda FixII Vector | Not available. |
| Predigested With Xho I | |
| XL1-Blue MRA E.coli Strain | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| XL1-Blue MRA (p2) E. coli Strain | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| pMF/BamH I Test Insert | Not available. |

Potential acute health effects

| | | |
|-------------------|----------------------------------|---|
| Inhalation | : Gigapack III packaging extract | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA | No known significant effects or critical hazards. |
| | c1857ind 1 Sam7 | |
| | Lambda FixII Vector | No known significant effects or critical hazards. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli Strain | No known significant effects or critical hazards. |
| | XL1-Blue MRA (p2) E. coli Strain | No known significant effects or critical hazards. |
| | pMF/BamH I Test Insert | No known significant effects or critical hazards. |
| Ingestion | : Gigapack III packaging extract | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA | No known significant effects or critical hazards. |
| | c1857ind 1 Sam7 | |
| | Lambda FixII Vector | No known significant effects or critical hazards. |
| | Predigested With Xho I | |
| | XL1-Blue MRA E.coli Strain | No known significant effects or critical hazards. |
| | XL1-Blue MRA (p2) E. coli Strain | No known significant effects or critical hazards. |
| | pMF/BamH I Test Insert | No known significant effects or critical hazards. |

SECTION 11: Toxicological information

| | | | |
|---------------------|---|---|---|
| Skin contact | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |
| Eye contact | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |

Symptoms related to the physical, chemical and toxicological characteristics

| | | | |
|---------------------|---|---|---|
| Inhalation | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. |
| Ingestion | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. |
| Skin contact | : | Gigapack III packaging extract VCS257 E. coli Strain Wild-Type Lambda DNA c1857ind 1 Sam7 Lambda FixII Vector Predigested With Xho I XL1-Blue MRA E.coli Strain XL1-Blue MRA (p2) E. coli Strain pMF/BamH I Test Insert | No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. |

SECTION 11: Toxicological information

| | | |
|--------------------|--|-------------------|
| Eye contact | : Gigapack III packaging extract | No specific data. |
| | VCS257 E. coli Strain | No specific data. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No specific data. |
| | Lambda FixII Vector Predigested With Xho I | No specific data. |
| | XL1-Blue MRA E.coli Strain | No specific data. |
| | XL1-Blue MRA (p2) E. coli Strain | No specific data. |
| | pMF/BamH I Test Insert | No specific data. |

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

| | | |
|------------------------|--|---|
| General | : Gigapack III packaging extract | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | Lambda FixII Vector Predigested With Xho I | No known significant effects or critical hazards. |
| | XL1-Blue MRA E.coli Strain | No known significant effects or critical hazards. |
| | XL1-Blue MRA (p2) E. coli Strain | No known significant effects or critical hazards. |
| | pMF/BamH I Test Insert | No known significant effects or critical hazards. |
| Carcinogenicity | : Gigapack III packaging extract | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | Lambda FixII Vector Predigested With Xho I | No known significant effects or critical hazards. |
| | XL1-Blue MRA E.coli Strain | No known significant effects or critical hazards. |
| | XL1-Blue MRA (p2) E. coli Strain | No known significant effects or critical hazards. |
| | pMF/BamH I Test Insert | No known significant effects or critical hazards. |
| Mutagenicity | : Gigapack III packaging extract | No known significant effects or critical hazards. |
| | VCS257 E. coli Strain | No known significant effects or critical hazards. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | Lambda FixII Vector Predigested With Xho I | No known significant effects or critical hazards. |
| | XL1-Blue MRA E.coli Strain | No known significant effects or critical hazards. |
| | XL1-Blue MRA (p2) E. coli Strain | No known significant effects or critical hazards. |

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SECTION 11: Toxicological information

| | | |
|------------------------------------|---|---|
| Teratogenicity | : pMF/BamH I Test Insert | No known significant effects or critical hazards. |
| | : Gigapack III packaging extract | No known significant effects or critical hazards. |
| | : VCS257 E. coli Strain | No known significant effects or critical hazards. |
| | : Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | : Lambda FixII Vector Predigested With Xho I | No known significant effects or critical hazards. |
| Developmental effects | : XL1-Blue MRA E.coli Strain | No known significant effects or critical hazards. |
| | : XL1-Blue MRA (p2) E. coli Strain | No known significant effects or critical hazards. |
| | : pMF/BamH I Test Insert | No known significant effects or critical hazards. |
| | : Gigapack III packaging extract | No known significant effects or critical hazards. |
| | : VCS257 E. coli Strain | No known significant effects or critical hazards. |
| Fertility effects | : Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | : Lambda FixII Vector Predigested With Xho I | No known significant effects or critical hazards. |
| | : XL1-Blue MRA E.coli Strain | No known significant effects or critical hazards. |
| | : XL1-Blue MRA (p2) E. coli Strain | No known significant effects or critical hazards. |
| | : pMF/BamH I Test Insert | No known significant effects or critical hazards. |
| | : Gigapack III packaging extract | No known significant effects or critical hazards. |
| | : VCS257 E. coli Strain | No known significant effects or critical hazards. |
| | : Wild-Type Lambda DNA c1857ind 1 Sam7 | No known significant effects or critical hazards. |
| | : Lambda FixII Vector Predigested With Xho I | No known significant effects or critical hazards. |
| | : XL1-Blue MRA E.coli Strain | No known significant effects or critical hazards. |
| : XL1-Blue MRA (p2) E. coli Strain | No known significant effects or critical hazards. | |
| : pMF/BamH I Test Insert | No known significant effects or critical hazards. | |

SECTION 12: Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|--|-------------------------------------|---|----------|
| VCS257 E. coli Strain Sodium chloride | Acute EC50 4.74 g/L Fresh water | Algae - Chlamydomonas reinhardtii | 96 hours |
| | Acute EC50 519.6 mg/l Fresh water | Crustaceans - Cypris subglobosa | 48 hours |
| | Acute IC50 6.87 g/L Fresh water | Aquatic plants - Lemna minor | 96 hours |
| | Acute LC50 1000000 µg/l Fresh water | Fish - Morone saxatilis - Larvae | 96 hours |
| | Chronic LC10 781 mg/l Fresh water | Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) | 3 weeks |
| | Chronic NOEC 6 g/L Fresh water | Aquatic plants - Lemna minor | 96 hours |
| | Chronic NOEC 0.314 g/L Fresh water | Daphnia - Daphnia pulex | 21 days |
| XL1-Blue MRA E.coli Strain Sodium chloride | Chronic NOEC 100 mg/l Fresh water | Fish - Gambusia holbrooki - Adult | 8 weeks |
| | Acute EC50 4.74 g/L Fresh water | Algae - Chlamydomonas reinhardtii | 96 hours |
| | Acute EC50 519.6 mg/l Fresh water | Crustaceans - Cypris subglobosa | 48 hours |

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SECTION 12: Ecological information

| | | | |
|---|---|---|---------------------------------|
| XL1-Blue MRA (p2) E.coli Strain Sodium chloride | Acute IC50 6.87 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water | Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours 96 hours 3 weeks |
| | Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water | Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult | 96 hours 21 days 8 weeks |
| | Acute EC50 4.74 g/L Fresh water | Algae - Chlamydomonas reinhardtii | 96 hours |
| | Acute EC50 519.6 mg/l Fresh water | Crustaceans - Cypris subglobosa | 48 hours |
| | Acute IC50 6.87 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water | Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) | 96 hours 96 hours 3 weeks |
| | Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water | Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult | 96 hours 21 days 8 weeks |

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

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SECTION 13: Disposal considerations

- Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
- Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | IMDG | IATA |
|---------------------------------|----------------|----------------|----------------|
| 14.1 UN number | Not regulated. | Not regulated. | Not regulated. |
| 14.2 UN proper shipping name | - | - | - |
| 14.3 Transport hazard class(es) | - | - | - |
| 14.4 Packing group | - | - | - |
| 14.5 Environmental hazards | No. | No. | No. |

Additional information

- 14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
- 14.7 Transport in bulk according to IMO instruments** : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

| | | |
|--------------|--|-----------------|
| Label | : Gigapack III packaging extract | Not applicable. |
| | VCS257 E. coli Strain | Not applicable. |
| | Wild-Type Lambda DNA c1857ind 1 Sam7 | Not applicable. |
| | Lambda FixII Vector Predigested With Xho I | Not applicable. |
| | XL1-Blue MRA E.coli Strain | Not applicable. |
| | XL1-Blue MRA (p2) E.coli Strain | Not applicable. |
| | pMF/BamH I Test Insert | Not applicable. |

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SECTION 15: Regulatory information

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals


Not listed.

Inventory list

| | |
|--------------------------|--|
| Australia | : Not determined. |
| Canada | : At least one component is not listed in DSL but all such components are listed in NDSL. |
| China | : Not determined. |
| Europe | : All components are listed or exempted. |
| Japan | : Japan inventory (ENCS) : Not determined. Japan inventory (ISHL) : Not determined. |
| New Zealand | : All components are listed or exempted. |
| Philippines | : Not determined. |
| Republic of Korea | : Not determined. |
| Taiwan | : All components are listed or exempted. |
| Thailand | : Not determined. |
| Turkey | : Not determined. |
| United States | : <input checked="" type="checkbox"/> All components are active or exempted. |
| Viet Nam | : Not determined. |

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

 Indicates information that has changed from previously issued version.

| | |
|-----------------------------------|---|
| Abbreviations and acronyms | : ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic |
|-----------------------------------|---|

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SECTION 16: Other information

PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 vPvB = Very Persistent and Very Bioaccumulative

[Procedure used to derive the classification according to Regulation \(EC\) No. 1272/2008 \[CLP/GHS\]](#)

| Classification | Justification |
|-----------------|---------------|
| Not classified. | |

[Full text of abbreviated H statements](#)

| | |
|---|--------------------------------|
| VCS257 E. coli Strain H319 | Causes serious eye irritation. |
| XL1-Blue MRA E.coli Strain H319 | Causes serious eye irritation. |
| XL1-Blue MRA (p2) E.coli Strain H319 | Causes serious eye irritation. |

[Full text of classifications \[CLP/GHS\]](#)

| | |
|---|--|
| VCS257 E. coli Strain Eye Irrit. 2 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 |
| XL1-Blue MRA E.coli Strain Eye Irrit. 2 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 |
| XL1-Blue MRA (p2) E.coli Strain Eye Irrit. 2 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 |

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